Kronos Bio Announces Publication of Preclinical Study Results for Investigational CDK9 Inhibitor KB-0742 in Cell Chemical Biology

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KB-0742 is a transcription regulatory network modulator discovered using the company's proprietary high-throughput screening platform

Research showed KB-0742 inhibited androgen receptor-dependent activity and reduced tumor growth in castration-resistant prostate cancer

Company is on track to submit an IND in the fourth quarter of 2020 and initiate a Phase 1/2 clinical trial for advanced solid tumors in 2021

SAN MATEO, Calif., and CAMBRIDGE, Mass., Oct. 22, 2020 (GLOBE NEWSWIRE) -- Kronos Bio, a clinical-stage biopharmaceutical company dedicated to the discovery and development of novel cancer therapeutics designed to transform patient outcomes by targeting dysregulated transcription, today announced results of a preclinical study of KB-0742, an investigational therapy being developed by the company. The research findings, published in *Cell Chemical Biology*, demonstrated that KB-0742 significantly reduced tumor growth in castration-resistant prostate cancer (CPRC) models as well as other cancers addicted to high levels of oncogenic transcription.

"Cyclin-dependent kinase 9 (CDK9) is an important transcriptional co-factor of MYC, a well-known driver of cancer that is dysregulated in a significant proportion of solid tumors. We designed KB-0742 to be an orally bioavailable CDK9 inhibitor with a differentiated selectivity profile," said Norbert Bischofberger, Ph.D., president and CEO of Kronos Bio. "We look forward to advancing clinical development of KB-0742 to establish the dose, safety and efficacy of this investigational therapy as a potential treatment for MYC-amplified tumors."

Kronos Bio and scientific founder Angela Koehler, Ph.D., associate professor at The Koch Institute for Integrated Cancer Research at the Massachusetts Institute of Technology (MIT), used the company's proprietary small molecule microarray (SMM) screening platform to discover molecules with the potential to inhibit androgen receptor (AR) activity and overcome treatment resistance in prostate cancer cells. Further investigation revealed that the initial lead compound KI-ARv-03 was a selective inhibitor of the transcriptional co-activator CDK9. Optimization of KI-ARv-03 resulted in KB-0742.

"The current treatment for prostate cancer consists of targeting AR activity, a key driver of prostate cancer. However, most patients will develop resistance to treatment and progress to CPRC," said Dr. Koehler. "Through our collaborative research, we discovered that selective CDK9 inhibition is an attractive therapeutic strategy for transcriptionally addicted tumor types such as CRPC, and that KB-0742 reduced CRPC cell division and increased cell death in vitro, and inhibited tumor growth in a human CRPC animal model."

As discussed in the publication, preclinical study results showed that treatment of CRPC with KB-0742 resulted in preferential depletion of AR-driven transcriptional programs and potent antiproliferative activity and induction of apoptosis against the CRPC cell line 22Rv1. An in vivo efficacy study examined the oral administration of KB-0742 in mice that had been engrafted with the human CRPC cell line and compared tumor growth to standard docetaxel chemotherapy (intraperitoneally at 15 mg/kg, once weekly), or escalating doses of KB-0742 (orally at 3, 10, and 30 mg/kg, once daily) over 21 days. The study showed an 82 percent tumor growth inhibition (TGI) with KB-0742 versus a 70 percent TGI with standard docetaxel treatment, demonstrating that KB-0742 significantly reduced tumor burden in a human prostate cancer xenograft model.

Prostate cancer is one of the most common and deadly cancers in men. The American Cancer Society estimates nearly 200,000 new cases and approximately 33,000 deaths from prostate cancer in 2020.

About Kronos Bio
Kronos Bio is a clinical-stage biopharmaceutical company dedicated to the discovery and development of novel cancer therapeutics designed to transform patient outcomes by targeting dysregulated transcription. The company has headquarters in San Mateo, Calif., and a research facility in Cambridge, Mass.

Forward-Looking Statements
This press release contains forward-looking statements for purposes of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. The press release may, in some cases, use terms such as "predicts," "believes," "potential," "proposed," "continue," "estimates," "anticipates," "expects," "plans," "intends," "may," "could," "might," "will," "should" or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. Forward-looking statements include statements regarding intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things: the timing of submission of an IND for KB-0742, the timing of initiation of a Phase 1/2 clinical trial of KB-0742 for advanced solid tumors, and the ability of Kronos Bio to advance clinical development of KB-0742 to establish the dose, safety and efficacy of KB-0742 as a potential treatment for MYC-amplified tumors. Various factors may cause differences between Kronos Bio's expectations and actual results as discussed in greater detail in Kronos Bio's filings with the Securities and Exchange Commission (SEC), including without limitation in its Registration Statement on Form S-1, as amended, originally filed with the SEC on September 18, 2020. Any forward-looking statements that are made in this press release speak only as of the date of this press release. Kronos Bio assumes no obligation to update the forward-looking statements whether as a result of new information, future events or otherwise, after the date of this press release.

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